

REMARKS/ARGUMENTS

Claims 2-4, 7-8, and 10-13, and 15-18 are pending after entry of the above amendments. Claims 1, 5, 6, 9, and 14 have been canceled without prejudice. Claim 18 is now the sole independent claim. Applicant has amended the remaining claims to incorporate all of the limitations of Claim 18. As such, the amendments do not raise any new issues and thus should be entered and considered.

The Examiner has rejected Claims 1-17 under 35 U.S.C. 112, first paragraph, for failure to comply with the enablement requirement. The Examiner also rejected Claims 1-18 under 35 U.S.C. 112, first paragraph, for failure to comply with the written description requirement.

The previous rejections based on Thompson have been withdrawn, but the Examiner has once again rejected the claims as being anticipated or obvious based on Aichinger.

The Enablement Rejections

As noted, Applicant has canceled Claim 1 and has amended the remaining claims to incorporate all of the limitations of Claim 18, which was not rejected on enablement grounds. Accordingly, it is submitted that the rejections for lack of enablement have been overcome.

The Written Description Rejections

The Examiner alleges that the language concerning the second sealing element's resisting reduction in diameter and exerting a bending moment on the first portion is not supported in the specification. This is clearly incorrect. The specification at page 12, lines 4-9, notes that prior-art container closures for liquids such as carbonated beverages that build up pressure in the container are prone to the closure upper surface bulging out. Then, at page 12, lines 10-32, and page 13, lines 1-19, the specification clearly describes the structure and operation of the closure in accordance with the invention as follows:

"The closure 1 of the present invention has an improvement in comparison with the closures of the prior art with respect to this

problem, since its constructive geometry favors the balance of tensions resulting from the internal pressure, and so it exhibits little bulging, even in situations considered critical in terms of internal pressures.

“The favorable geometry is achieved by means of the positioning and the shape of the annular sealing stop 4. As already stated, it projects from the second portion 13 of the closure 1 and has a first upper portion cooperating with the internal surface of the first portion 9. In this way, in the region 14 (which is annular) of the portion 9, where this cooperation takes place, the thickness of the material is considerably larger than in the rest of the closure 1. In addition, this annular region of large thickness 14 delimits an internal area (which corresponds to the largest part of the first portion 9), in which the thickness is significantly smaller, in order to get lower the manufacturing cost of the closure 1.

“When the internal pressure of the container/bottle equipped with the closure disclosed now increases too much, there would be a natural tendency of the whole closure to become deformed due to the bulging of the first portion. Once the bulging occurs, this surface, which was circular before, would become semispherical, resulting in a decrease in its diameter, which, in turn, causes a decrease in diameter of the second cylindrical portion. However, the free end of this second portion, where an anti-tamper system is provided (which will be commented later), would not undergo any change, and so this second portion would tend to have the shape of a truncated cone.

“With the present closure, this does not occur, since the large amount of material in the region of large thickness prevents its

diameter from decreasing.

“As can be seen in figure 5, the internal pressure of the package tends to bulge the top part of the closure to a position indicated by X’ in the drawing. With the tendency of this upper portion to deform, a bending moment occurs in the large-thickness region 14, forcing the deformation. However, due to the large amount of material in the region 14, it exerts a bending moment in the opposite direction (illustrated with M in the figure), which greatly limits this deformation X’. The constructive characteristic of the present closure, which has a large-thickness region 14, brings two practical effects, namely:

- first of all, as already stated, there is a considerable increase in the resistance of the closure 1 to the deformation of its upper portion; and

- secondly, this so much desired increase in resistance to bending does not result in an increase in the manufacturing costs of the closure, since the increase in material is localized, representing little with respect to the total mass.”

Thus, the specification provides nearly verbatim support (as noted by underlining above) for the language in Claim 18 that the Examiner asserts is not described. As such, the written description rejection clearly is erroneous and should be withdrawn.

The Rejections Based on Aichinger

The Examiner takes the position that since the outer peripheral portion 6 of Aichinger’s closure is thicker than the rest of the closure, it would act in the same way as the annular stop of the present invention.

Applicant respectfully disagrees with this reasoning because it directly *contradicts* what Aichinger says about the functioning of his closure. Aichinger's closure is actually designed to *allow* the portion 6 to decrease in diameter. Aichinger describes his closure as having a great elasticity to improve sealing. The cap top 4 has elasticity so that this produces a reduction in diameter of the closure particularly in the outer area, eliminating a clearance *a* (Figure 1) between the closure and neck. A comparison between Figure 1 (closure undeformed) and Figure 2 (closure screwed onto the container and deformed) clearly illustrates the deformation that occurs. Aichinger describes an example at column 4, in which the outer diameter C of the closure prior to screwing it onto a container was 30.5 mm, but after screwing the closure onto the container the outer diameter C1 was 30.1 mm. Furthermore, because of the great elasticity of the top panel of the closure, it is believed that internal pressure of the container contents on the top panel would further bulge the top panel outwardly and further reduce the diameter of the closure.

The closure of the claimed invention works contrarily, in that the second sealing element exerts a bending moment on the top panel of the closure to resist its deformation. The annular stop of the second sealing element resists reduction in diameter of the closure and thereby exerts such a bending moment to counteract the internal pressure's bending moment.

Aichinger does not disclose or suggest a closure as claimed in Claim 18. Indeed, Aichinger teaches away from providing such a closure. Thus, Claim 18 is not anticipated or rendered obvious by Aichinger.

Additionally, with regard to Claim 18, the third sealing element is recited as having a lower surface facing away from the first portion, the lower surface of the third sealing element being positioned to be *contacted by the container neck* when the closure is applied thereto. In contrast, Aichinger's third sealing element 5 has a lower surface facing away from the first portion 4 that is not contacted by the container neck (see Figure 2). Instead, the radially inwardly facing surface of the sealing element 5 is what contacts the container neck. For these further reasons, Claim 18 is not anticipated or rendered obvious by Aichinger.

The Office Action states that although Aichinger does not disclose the claimed shape of the third sealing element, it would have been an obvious matter of design choice to make Aichinger's closure have the claimed shape for the third sealing element.

However, Claim 18 further recites that the third sealing element is "projecting from the inner surface of the second portion" of the closure. In contrast, Aichinger's third sealing element 5 projects from the first portion 4 in the region of the juncture 6 between the first portion 4 and second portion 3 of the closure (see col. 3, lines 43-45). Thus, there is more than a mere shape difference between the claimed third sealing element and Aichinger's sealing element 5. The claimed arrangement is substantially different from Aichinger, and is not suggested by Aichinger. The Office Action has not pointed to any reason or motivation that would have led a person of ordinary skill in the art to modify Aichinger's third sealing element to project from the inner surface of the second portion and to have a lower surface positioned to be contacted by the container neck.

Indeed, Aichinger desires the cap top 4 to have elasticity so that this produces a reduction in diameter of the closure particularly in the outer area, eliminating a clearance *a* (Figure 1) between the closure and neck. The clearance *a* is defined between the container neck and the radially inwardly facing surface of the sealing element 5. Since Aichinger desires this inwardly facing surface of the sealing element 5 to contact the container neck via deformation (i.e., diameter reduction) of the closure, there is no reason why the skilled person would modify Aichinger's closure to *resist* such deformation, and to relocate the sealing element 5 as in Claim 18.

For all of the above reasons, Applicant respectfully submits that Claim 18 is patentable over Aichinger. Since all of the remaining claims include all of the limitations of Claim 18, they likewise are patentable for at least the same reasons.

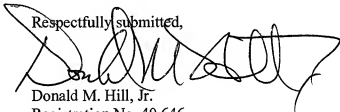
Appl. No.: 10/690,714
Amdt. dated 10/18/2006
Reply to Office action of July 19, 2006

Conclusion

Based on the above amendments and remarks, it is submitted that the application is in condition for allowance.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Donald M. Hill, Jr.', written over the typed name.

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